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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/275,273	03/23/1999	FRANK P. HART	42390.P5368	9527

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EXAMINER

MYERS, PAUL R

ART UNIT	PAPER NUMBER
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2112

DATE MAILED: 04/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/275,273	<b>Applicant(s)</b> HART ET AL.	
	<b>Examiner</b> Paul R. Myers	<b>Art Unit</b> 2112	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 19-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the primary voltage regulator to provide power to a load from at least one of a first power source or a second power source, a second voltage regulator to selectively provide additional power to the load from the second power source based at least in part on the availability of the second power source, a processor module containing the primary voltage regulator and the load, and a motherboard to which the processor module is coupled, said motherboard containing the secondary voltage regulator must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will

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be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

2. Claim 38 is objected to because of the following informalities: Claim 38 claims identical subject matter as claim 26. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 19-20, 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Shintomi PN 5,598,089.

In regards to claims 19, 29: Shintomi teaches an apparatus (figure 1) comprising: a primary voltage regulator (7) to provide primary power (output of 7) to a load (inherent) from at least one of a first power source (10) or a second power source (2); and a second voltage regulator (6) to selectively (based upon the presence of the source 2) provide additional power (output of 6) to the load from the second power source (2) based at least in part on the availability of the second power source (Column 3 line 35 to Column 4 line 14).

In regards to claim 20: Shintomi teaches the first power source comprises a battery (10) and the second power source comprises an alternating current (AC) line adapter (2).

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5. Claims 19-20 and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Burgin PN 4,327,298.

In regards to claims 19, 29: Burgin teaches an apparatus (figure 1) comprising: a primary voltage regulator (23) to provide primary power (output of 23) to a load (25) from at least one of a first power source (34) or a second power source (10-14); and a second voltage regulator (17) to selectively (based upon the presence of the source 14) provide additional power (output of 17) to the load from the second power source (10-14) based at least in part on the availability of the second power source.

In regards to claim 20: Burgin teaches the first power source comprises a battery (34) and the second power source comprises an alternating current (AC) line adapter (10-14).

6. Claims 19 and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Okamoto et al PN 5,493,155.

In regards to claims 19, 29: Okamoto teaches an apparatus (figure 1b) comprising: a primary voltage regulator (2) to provide primary power (output of 2) to a load (7) from a first power source (1); and a second voltage regulator (5) to selectively (based upon sufficient power provided from 1) provide additional power (output of 5) to the load (7) from the second power source (4) based at least in part on the availability of the second power source.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 21-22, 24, 27, 30, 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shintomi PN 5,598,089 in view of Bates PN 3,521,150.

In regards to claims 21, 30, 33: Shintomi teaches the plural voltage regulators as described above. Shintomi does not teach a feedback network coupled to the load, the primary voltage regulator, and the secondary voltage regulator, said feedback network to control the secondary voltage regulator to provide the additional power if a load power reaches a threshold level. Bates teaches a feedback network (Voltage response circuit) coupled to a load and a plurality of regulators (6 regulators) to control the additional voltage regulators to provide additional power if a load power reaches a threshold (Figure 2). It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide a feedback for switching on additional regulators because this would have allowed for handling greater load requirements.

In regards to claim 22: Bates teaches the feedback network comprises a portion of all the regulators (Figure 3).

In regards to claim 24: Bates teaches a tertiary voltage regulator to detachably couple with the load, said tertiary voltage regulator to selectively provide further additional power to the

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load from the power source. Shintomi teaches providing power based upon availability of the power source.

In regards to claim 27: Bates teaches a feedback network to couple to the load, the primary voltage regulator, the secondary voltage regulator, and the tertiary voltage regulator, said feedback network to control the secondary voltage regulator to provide the additional power if a load power reaches a first threshold level and the second power source is available, and to control the tertiary voltage regulator to provide the further additional power if the load power reaches a second threshold level and both the tertiary voltage regulator and the second power source are available.

9. Claims 23, 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shintomi PN 5,598,089 in view of Tanikawa PN 5,838,929.

In regards to claims 23, 34: Shintomi teaches a general purpose power supply and is silent upon possible locations for the regulators. Tanikawa teaches a processor module with its own regulator (14) and a motherboard with its own regulator (21). It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide Shintomi's power control in the system of Tanikawa because this would have allowed for battery backup.

In regards to claim 35: Bates teaches a feedback network (Voltage response circuit) coupled to a load and a plurality of regulators (6 regulators) to control the additional voltage regulators to provide additional power if a load power reaches a threshold (Figure 2). It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide a

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feedback for switching on additional regulators because this would have allowed for handling greater load requirements.

In regards to claim 36: Bates teaches the feedback network comprises a portion of all the regulators (Figure 3).

10. Claims 25, 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shintomi PN 5,598,089 in view of Bates PN 3,521,150 as applied to claim 24 further in view of Yanagisawa PN 6,078,109.

In regards to claim 25: Shintomi teaches a general purpose power supply and is silent upon possible locations for the regulators. Yanagisawa teaches a mobile computer (100), said mobile computer containing the primary voltage regulator (12), and the load (13); and a docking station to detachably receive the mobile computer (200), said docking station containing the tertiary voltage regulator (22). Shintomi teaches the secondary voltage regulator,

In regards to claim 31: Yanagisawa teaches a detachable voltage regulator.

11. Claims 26, 32 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shintomi PN 5,598,089 in view of Bates PN 3,521,150 and Yanagisawa PN 6,078,109 as applied to claim 25 further in view of Tracy PN 6,191,943.

In regards to claims 26, 32, 38: Yanagisawa does not teach thermal heat dissipation for the docked third voltage regulator. Tracy teaches active heat dissipation for the docked notebook.



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It would have been obvious to add heat dissipation because this would have protected the notebook from overheating.

12. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shintomi PN 5,598,089 in view of Bates PN 3,521,150 as applied to claim 24 and further in view of Norris PN 5,630,148.

In regards to claim 28: Bates teaches a variable load. Bates however is silent as to the type of load. Norris teaches a load that has at least a low performance mode, a medium performance mode, and a high performance mode.

13. Claims 37, 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shintomi PN 5,598,089 in view of Bates PN 3,521,150 and Tanikawa PN 5,838,929 as applied to claim 34 further in view of Yanagisawa PN 6,078,109.

In regards to claim 37: Shintomi teaches a general purpose power supply and is silent upon possible locations for the regulators. Yanagisawa teaches a mobile computer (100), said mobile computer containing the primary voltage regulator (12), and the load (13); and a docking station to detachably receive the mobile computer (200), said docking station containing the tertiary voltage regulator (22). Shintomi teaches the secondary voltage regulator,

In regards to claim 39: Bates teaches a feedback network (Voltage response circuit) coupled to a load and a plurality of regulators (6 regulators) to control the additional voltage regulators to provide additional power if a load power reaches a threshold (Figure 2). It would

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have been obvious to a person of ordinary skill in the art at the time of the invention to provide a feedback for switching on additional regulators because this would have allowed for handling greater load requirements.

### ***Conclusion***

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

PN 4,194,147 to Payne et al teaches multiple voltage regulators in parallel like Bates except for providing load balancing.

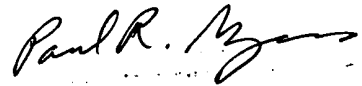
PN 4,879,504 to McVey teaches multiple voltage regulators in parallel like Bates. Additional references are cited teaching multiple voltage regulators with different power sources as well as the same power source. Including references that teach handling increased load demand.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul R. Myers whose telephone number is 571 272 3639. The examiner can normally be reached on Mon-Thur 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on 571 272 3632. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**PAUL R. MYERS  
PRIMARY EXAMINER**

PRM  
March 30, 2005